

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application.

1. (currently amended) ~~Peptide nucleic~~Peptide-nucleic- acid (PNA) comprising 12 to 24 nucleotide bases, said ~~peptide nucleic~~peptide-nucleic- acid being complementary to the sense or antisense filament of human N-myc gene.
2. (currently amended) The ~~peptide nucleic~~peptide-nucleic- acid (PNA) according to claim 1, in which antisense PNA (5'-TCCACCCAGCGGTCC-3') is an only sequence complementary to 5'-UTR region of human N-myc gene.
3. (currently amended) The ~~peptide nucleic~~peptide-nucleic- acid (PNA) according to claim 1, in which PNA is conjugated with a carrier that can get through the nuclear membrane of target cells expressing N-myc gene.
4. (currently amended) The conjugated ~~peptide nucleic~~peptide-nucleic- acid (PNA) according to claim 3, in which said carrier is conjugated in 3' position to PNA sequence.
5. (currently amended) The ~~peptide nucleic~~peptide-nucleic- acid (PNA) according to claim 3, in which said carrier is chosen among the following peptide sequences:
PKKKRKV;
RQIKIWFQNRMRMKWKK;
GWTLNSAGYLLGKINLAALAKKIL;
(D)-KKWKMRNRNQFWVKVQR;
GRKKRRQRRRPPQ;
YGRKKRRQRRR;
MSVLTPLLLRGLTGSARRLPVPRAKIHSL;
KFFKFFKFFK;
KKKK.
6. (currently amended) The ~~peptide nucleic~~peptide-nucleic- acid (PNA) according to claim 3, in which conjugated PNA is a sense ~~anti-gene~~antigen PNA or an antisense ~~anti-gene~~antigen PNA.
7. (currently amended) The ~~peptide nucleic~~peptide-nucleic- acid (PNA) according to claim

6, in which sense ~~anti-gene~~antigen PNA or antisense ~~anti-gene~~antigen PNA (5'-ATGCCGGGCATGATCT-3'; antisense ~~anti-gene~~antigen: 5'-AGATCATGCCCGGCAT-3') are complementary to a ~~exon~~exon 2 sequence of N-myc gene.

8. (currently amended) The ~~peptide nucleic~~peptide-nucleic acid (PNA) according to claim 3, in which sense ~~anti-gene~~antigen PNA or antisense ~~anti-gene~~antigen PNA are conjugated in 3' with a nuclear localization signal (NLS) deriving from SV40 virus (peptide sequence PKKKRKV).

9. (currently amended) A pharmaceutical composition comprising a ~~peptide nucleic~~peptide-nucleic acid PNA according to claim 1.

10. (currently amended) ~~A method to treat genetic diseases comprising the step of using a peptide nucleic~~ Use of a peptide-nucleic acid PNA according to claim 1 ~~for preparing a pharmaceutical composition for treating genetic diseases.~~

11. (currently amended) ~~The method Use of a peptide-nucleic acid PNA according to claim 10, wherein the genetic diseases are for preparing a pharmaceutical composition for treating tumors associated to the expression of N-MYC protein.~~

12. (currently amended) ~~The method Use of a peptide-nucleic acid PNA according to claim 10, wherein the genetic diseases are for preparing a pharmaceutical composition for treating tumors selected from the group consisting of such as neuroblastoma, retinoblastoma, medulloblastoma, glioblastoma, astrocytoma or lung small cell tumor, rhabdomyosarcoma, and B-type lymphoblastic acute leukemias.~~

13. (currently amended) The ~~peptide nucleic~~peptide-nucleic acid (PNA) according to claim 4, in which said carrier is chosen among the following peptide sequences:

PKKKRKV;
RQIKIWFQNRRMKWKK;
GWTLSAGYLLGKINLAALAKKIL;
(D)-KKWKMRNRNQFWVKVQR;
GRKKRRQRRRPPQ;
YGRKKRRQRRR;
MSVLTPLLRLGTGSARRLPVPRAKIHSL;
KFFKFFKFFK;
KKKK.

14. (currently amended) The ~~peptide nucleic~~~~peptide-nucleic~~ acid (PNA) according to claim 4, in which conjugated PNA is a sense ~~anti-gene~~~~antigen~~ PNA or an antisense ~~anti-gene~~~~antigen~~ PNA.

15. (currently amended) The ~~peptide nucleic~~~~peptide-nucleic~~ acid (PNA) according to claim 5, in which conjugated PNA is a sense ~~anti-gene~~~~antigen~~ PNA or an antisense ~~anti-gene~~~~antigen~~ PNA.

16. (currently amended) The ~~peptide nucleic~~~~peptide-nucleic~~ acid (PNA) according to claim 14, in which sense ~~anti-gene~~~~antigen~~ PNA or antisense ~~anti-gene~~~~antigen~~ PNA (5'-ATGCCGGGCATGATCT-3'; antisense ~~anti-gene~~~~antigen~~: 5'-AGATCATGCCCGGCAT-3') are complementary to a ~~exon~~~~exone~~ 2 sequence of N-myc gene.

17. (currently amended) The ~~peptide nucleic~~~~peptide-nucleic~~ acid (PNA) according to claim 15, in which sense ~~anti-gene~~~~antigen~~ PNA or antisense ~~anti-gene~~~~antigen~~ PNA (5'-ATGCCGGGCATGATCT-3'; antisense ~~anti-gene~~~~antigen~~: 5'-AGATCATGCCCGGCAT-3') are complementary to a ~~exon~~~~exone~~ 2 sequence of N-myc gene.